

PRELIMINARY REMARKS

Claim 1 to 15 as set forth in Appendix I of this paper are now pending in this case. Claim 1 has been amended as indicated.

Accordingly, applicants have further specified the thermoplastic composition with regard to the minimum amount of constituent (a) corresponding to the disclosure on page 16, indicated lines 1 to 5, of the application. No new matter has been added.

The Examiner has maintained the rejection of Claims 1 to 4, 7, 8 and 10 under 35 U.S.C. §102(e) as being anticipated by the teaching of *Topolkaraev et al.* (US 6,492,452) and has extended the rejection to Claims 11 to 13, emphasizing that *Topolkaraev et al.*'s generic disclosure mentions biodegradable polyesters, and that the examination cannot be focused on the examples.

A generic disclosure is, however, not sufficient to anticipate each species or subgenus which happens to fall within the generic range of the disclosure¹⁾. To anticipate a claimed invention within the meaning of Section 102, a reference has to show exactly what is claimed, cf. the identical subject matter has to be shown in the reference in as complete detail as is contained in the claim²⁾. Since a generic disclosure does not anticipate species which fall within it, a determination whether a reference provides an anticipating disclosure of a claimed invention necessarily has to focus on preferred embodiments and examples taught by the reference.

To anticipate the subject matter of applicants' Claim 1³⁾ a reference has to teach at least one specific composition which comprises, based on the total weight of the composition,

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- 1) Note in particular Corning Glass Works v. Sumitomo Electric U.S.A., 868 F.2d 1251, 9 USPQ2d 1962 (CAFC 1989), which holds that a genus does not inherently disclose all species; and also In re Jones, 958 F.3d 347, 21 USPQ2d 1614 (CAFC 1992), which holds that a genus does not even render all species that happen to fall within the genus obvious.
 - 2) Richardson v. Suzuki Motor Co., 868 F.2d 1226, 9 USPQ2d 1913 (CAFC 1989); Lindemann Maschinenfabrik v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481 (CAFC 1984).
 - 3) The same applies, mutatis mutandis, to the subject matter defined in applicants' Claims 2 to 4, 7, 8 and 10 to 13 which depend upon Claim 1 and incorporate the respective limitations by reference. Compare In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (CAFC 1988), which holds that if an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is non-obvious, and In re Grose, 592 F.2d 1161, 201 USPQ 57 (CCPA 1979), which holds that anticipation is the ultimate or epitome of obviousness.

- a) at least 30% by weight of at least one biodegradable thermoplastic copolyester, and
- b) from 0.01 to 15% by weight of at least one hydrophobicized phyllosilicate,

or has to specifically address compositions wherein one or more biodegradable thermoplastic copolyester(s) and one or more hydrophobicized phyllosilicate(s) are combined in the specified weight ratios.

The teaching of *Topolkaraev et al.* does not disclose any specific composition wherein at least one biodegradable thermoplastic copolyester is combined with at least one hydrophobicized phyllosilicate. The teaching of *Topolkaraev et al.* also fails to specifically address compositions wherein one or more biodegradable thermoplastic copolyester(s) and one or more hydrophobicized phyllosilicate(s) are combined in the weight ratios specified in applicants' Claim 1. Rather, *Topolkaraev et al.* generically refer to blends⁴⁾ of

- water-responsive ethylene oxide (co)polymer (PEO) is also "environmentally degradable, particularly biologically degradable", and
- organically modified clay particles and/or organically modified layered silicate particles,

cf. PEO blends, which may further comprise additional water-responsive, water-dispersible and/or biodegradable polymers⁵⁾. While *Topolkaraev et al.* mention biodegradable (co)polyesters as examples for the latter group of co-constituents⁶⁾, no information is given as to the amounts in which any one of the additional co-constituents, or -more particularly- the additional biodegradable (co)polyesters, are to be incorporated into the PEO blend. As such, the teaching of *Topolkaraev et al.* clearly fails to identically show what is defined in applicants' claims with the specificity which is required for anticipation within the meaning of Section 102. In light of the foregoing and the arguments already presented in applicants' previous paper, it is therefore respectfully requested that the rejection of Claims 1 to 4, 7, 8 and 10 to 13 under 35 U.S.C. §102(e) based on the teaching of *Topolkaraev et al.* be withdrawn. Favorable action is respectfully solicited.

4) Note col. 3, indicated lines 20 to 35, of *US 6,492,452*.

5) Note col. 6, indicated line 54, to col. 7, indicated line 3, of *US 6,492,452*.

6) Note col. 7, indicated lines 4 to 24, of *US 6,492,452*.

For completeness sake it is further respectfully submitted that the teaching of *Topolkaraev et al.* cannot be considered to render applicants' invention as defined in Claim 1 and further specified in Claims 2 to 4, 7, 8 and 10 to 13 prima facie obvious within the meaning of 35 U.S.C. §103(a). Obviousness under Section 103(a) requires more than the mere possibility to make a selection from the generic disclosure of a reference which mirrors the combination of requirements set forth in an applicant's claim. It is also necessary that the reference provide some teaching or suggestion which would motivate a person of ordinary skill in the art to make the particular selection which results in the claimed combination⁷⁾. Where the motivating teaching or suggestion is not found in the reference, any possible selection and combination within the generic disclosure is equally likely and the reference no more than invites a person of ordinary skill to make and try out each of the possible selections and combinations. "Obvious to try" is, however, not a proper basis for finding that a claimed invention is unpatentable under Section 103(a)⁸⁾. Also, where the reference fails to suggest the particular selection and combination which is necessary to arrive at the claimed subject matter, any focus on that particular selection and combination would necessarily be based on information obtained from the applicant's disclosure, cf. such a selection and combination would be based on hindsight⁹⁾. The teaching of *Topolkaraev et al.* is, with regard to the information pertaining to combinations comprising a biodegradable thermoplastic copolyester and organically modified clay particles and/or organically modified layered silicate particles, by far too general to motivate a person of ordinary skill to specifically select and combine

- a) at least 30% by weight, based on the total weight of the composition, of at least one biodegradable thermoplastic copolyester, and
- b) from 0.01 to 15% by weight, based on the total weight of the composition, of at least one hydrophobicized phyllosilicate.

7) In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438, 1442 (CAFC 1991). See also In re Baird, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (CAFC 1994); In re Jones, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (CAFC 1992).

8) Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (CAFC 1989), where the Court held that an invention was merely "obvious to try" if the prior art gives either no indication of which parameters are critical or no direction as to which of the many possible choices is likely to be successful.

9) In re Dow Chemical Co., 837 F.2d 469, 5 USPQ2d 1529 (CAFC 1988).

Moreover, the invention as a whole which is referenced in 35 U.S.C. §103(a) is not limited to the specific combination of elements which is recited in the claims but also includes the properties which are inherent in the claimed subject matter¹⁰). Applicants' have found that the particular combination of the constituents (a) and (b) provides the thermoplastic composition with excellent mechanical properties and performance characteristics, and improves the yield stress and processability properties of the composition without impairing other properties such as toughness and biodegradability.

The teaching of *Topolkaraev et al.* solely refers to an effect which arises when the modified clay or silicate particles are combined with the ethylene oxide (co)polymer. The teaching of *Topolkaraev et al.* does not suggest or imply that any particular effect will result when modified clay or silicate particles are combined with a polymer which differs from ethylene oxide polymers such as a biodegradable thermoplastic copolyester. Accordingly, nothing in the teaching of *Topolkaraev et al.* suggests or implies that the mechanical properties and performance characteristics, as well as the yield stress and processability, of a biodegradable thermoplastic composition can be improved without impairing other properties such as toughness and biodegradability by combining applicants' constituents (a) and (b) in the requisite weight percentages¹¹).

In light of the foregoing, the teaching of *Topolkaraev et al.* when taken alone not only fails to render the specific combination of elements which is defined in applicants' claims obvious; the teaching of *Topolkaraev et al.* when taken alone also, and more pertinently, fails to render applicants' invention as a whole prima facie obvious within the meaning of Section 103(a)¹²).

The Examiner has also maintained that the subject matter of Claims 5 and 6 as well as Claims 14 and 15 is unpatentable under 35 U.S.C. §103(a) in light of the teaching of *Topolkaraev et al.* when taken in view of the disclosure of *Hyunkook et al.* (WO 92/13019) or in view of the disclosure of *Warzelhan et al.* (US 6,018,004), and that the subject matter of Claim 9 is unpatentable under 35 U.S.C. §103(a) in

10) Note, for example, *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6, 8 (CCPA 1977).

11) Note in this regard the data provided in applicants' Tables 1 and 2, pages 26 and 27, of the application.

12) Obviousness cannot be predicated on what is not known at the time an invention is made, even if the inherency of a certain feature is later established (*In re Rijk-aert*, 9 F.2d 1531, 28 USPQ2d 1955 (CAFC 1993)).

light of the teaching of *Topolkaraev et al.* when taken in view of the disclosure of *Bagrodia et al.* (US 6,395,386).

In response to the arguments previously presented by applicants the Examiner emphasizes that the disclosures of *Hyunkook et al.* and of *Warzelhan et al.* are deemed to be within the realm of analogous art. It is respectfully noted that applicants did not argue the contrary. Rather, applicants' pointed out that *Hyunkook et al.* as well as *Warzelhan et al.* teach that it is possible to improve the mechanical properties and performance characteristics of biodegradable polyesters by chemically modifying the biodegradable polyester. The respective secondary references are, therefore, not deemed to close or even narrow the gap between the teaching of *Topolkaraev et al.* and applicants' invention as defined in Claim 1 and further specified in the dependent claims.

It is also noted with regard to the Examiner's reply to applicants' arguments that the "field of endeavor" in the determination whether a reference is analogous art is the field of the applicant's endeavor¹³⁾ and not an area which is based on the teaching of the primary reference. Applicants' field of endeavor is improve the mechanical properties and performance characteristics of biodegradable polyesters. For the reasons already presented by applicants, the disclosure of *Bagrodia et al.* is not deemed to meet the criteria for analogous art.

In light of the foregoing and the arguments already presented in applicants' previous paper, it is therefore respectfully requested that the rejection

- of Claims 5, 6, 14 and 15 under 35 U.S.C. §103(a) based on the teaching of *Topolkaraev et al.* taken in view of the disclosure of *Hyunkook et al.*;
- of Claims 5 and 6 35 U.S.C. §103(a) based on the teaching of *Topolkaraev et al.* taken in view of the disclosure of *Warzelhan et al.*; and
- of Claim 9 35 U.S.C. §103(a) based on the teaching of *Topolkaraev et al.* taken in view of the disclosure of *Bagrodia et al.*;

be withdrawn. Favorable action is respectfully solicited.

13) Note, for example, MPEP §2141.01(a).

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Respectfully submitted,

KEIL & WEINKAUF

A handwritten signature in black ink, appearing to read 'H B Keil', written in a cursive style.

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Encl.: THE LISTING OF CLAIMS (Appendix I)

HBK/BAS